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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,046	09/20/2003	Sunil K. Nagarajrao	SJO920030012US1	6579

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EXAMINER	
CHEA, PHILIP J	

ART UNIT	PAPER NUMBER
2153	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/666,046	NAGARAJRAO ET AL.	
	Examiner	Art Unit	
	PHILIP J. CHEA	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to an Amendment filed July 24, 2008. Claims 1,3-5,17 are currently pending. Any rejection not set forth below has been overcome by the current Amendment.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,3-5,17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matheny et al. (US 2002/0161883), herein referred to as Matheny, and further in view of Goringe et al. (US 2003/0046427), herein referred to as Goringe.

As per claim 1, Matheny discloses a network management system for discovering information about a network, as claimed, comprising:

a plurality of nodes (see Fig. 1 [110], *showing a plurality of network devices (i.e. nodes)*);

plural discovery agents on said nodes adapted to discover information concerning said network (see paragraph 8, *describing a number of discovery agents to perform a coordinated network discovery for network [100]*);

each of said discovery agents having an associated discovery capability (see paragraph 17, *describing how the agents have capabilities such as attributes of the agents, calls that the agents supports that are defined in a capability matrix, and different discovery agents may perform discovery operations using different techniques, and may collect different types of data (see paragraph 11))*;

each of said discovery agents having an associated discovery assignment (see paragraph 19, *describing how a discovery operation is initiated by a network manager wherein the request may include requested data types and designate an address range or subnets for discovery and the discovery request may be compared to the available capabilities defined by the capability matrix for the agent)*; and

collectively, said agent discovery assignments being a subset of said agent discovery capabilities (see paragraph 19, *since the request includes an assignment that is compared to the available capabilities, it is implied that the assignment may not use the entire capability of the agent, for example the assignment may be to discover a certain range of addresses that is a subset of the range of addresses that the agent is capable of discovering)*;

said agent discovery capabilities being overlapping (see paragraph 19, *describing how more than one agent can be capable of performing the requested discovery request*).

Although the system disclosed by Matheny shows substantial features of the claimed invention (discussed above), it fails to disclose said discovery assignments being non-overlapping, such that no network device is discovered more than once by different discovery agents and no duplicate discovery information is generated.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Matheny, as evidenced by Goringe.

In an analogous art, Goringe discloses a system for discovering a topology of a distributed processing network that includes a first topology discovery agent configured to contact a first set of routers and a second topology discovery agent configured to contact a second set of routers (see Abstract). Goringe further discloses said discovery assignments being non-overlapping, such that no network device is discovered more than once by different discovery agents and no duplicate discovery information is generated (see paragraph 43, *describing how the system maintains a number of listings (outstanding, finished, etc) to avoid duplication of computational effort during topology discovery so that interfaces that have been contacted do not need to be contacted again implying non-overlapping discovery assignments so that no network device is discovered more than once by different agents and no duplicate discovery information is generated*).

Given the teaching of Goringe, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Matheny by employing non-overlapping discovery assignments, such as disclosed by Goringe, in order to avoid duplication of computational effort.

As per claim 3, Matheny further discloses that the agent discovery assignments are based on said discovery capabilities (see paragraph 19).

As per claim 4, Matheny further discloses that the agent discovery assignments reflect one or more data collection service registrations with said plurality discovery agents, agents cost to obtain network information, load balancing among said plural discovery agents, and assignment churn (see paragraph 17, *describing registration operation for registering agents for data collection*).

As per claim 5, Matheny further discloses that agent discovery assignments comprise one or both of inband and outband discovery assignments (see paragraph 11).

As per claim 17, Matheny-Goringe disclose a network discovery agent for use in a data storage network, as claimed, comprising:

a processing node (see Matheny paragraph 8);

discovery capability logic determining and providing agent discovery capability information to a requestor, said agent discovery capability information being a subset of all discovery information obtainable by said agent (see Matheny paragraph 19, *describing a requestor (i.e. network manager) requesting a discovery request and checking the capability of agents that can satisfy the desired discovery request*); and

discovery query logic implementing discovery queries based on agent discovery assignment information determined from said capability information (see Matheny paragraph 19, *where the discovery queries are performed based on the agents that were qualified to perform the discovery*); and

said discovery queries utilizing non-overlapping discovery assignments, such that no network device is discovered more than once by different discovery agents and no duplicate discovery information is generated (see Goringe paragraph 43).

3. Applicant's arguments filed June 18, 2008 have been fully considered but they are not persuasive.

A) Applicant contends that Matheny does not disclose one or more of data collection service registration with said plurality of discovery agents, agent cost to obtain network information, load balancing among said plurality of discovery agents, and assignment churn.

In considering A), the Examiner respectfully disagrees. Matheny discloses agent discovery assignments reflecting data collection service registrations with said plural discovery agents in paragraph 17. Paragraph 17, describes a registration operation by having the agent register with the discovery manager by placing an XML file in an agent directory. The XML file includes tags describing the attributes of the agent. Since the claim recites “one or more” language, the Examiner has provided at least one limitation met by Matheny to meet the "one or more" language requirement.

B) Applicant contends that Matheny does not disclose discovery capability logic determining and providing agent discovery capability information to a requestor, said agent discovery capability information being a subset of all discovery information obtainable by said agent.

In considering B), the Examiner respectfully disagrees. Matheny shows that an agent registers it capabilities in an agent directory. A network manager i.e. requestor, initiates a discovery request that includes a search for data types and certain address ranges or subnets for discovery, where the discovery request may be compared to the available capabilities of the agent i.e. are there any agents that are capable of taking care of the request. Since the requestor is only seeking a certain subset of data types or address ranges or subnets, and the matrix includes the agent capabilities that may go beyond that, the Examiner believes that the discovery capability information is a subset of all the discovery information obtainable by the agent.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHILIP J. CHEA whose telephone number is (571)272-3951. The examiner can normally be reached on M-F 6:30-4:00 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Glenton B. Burgess/
Supervisory Patent Examiner, Art Unit 2153

Philip J Chea
Examiner
Art Unit 2153

PJC 9/3/08